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Attention: Docket Management System

2007 Review Cycle Comments for IAEA TS-R-1 regulations - Docket number RSPA-04 16964, notice no. 04-3

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Objective of change:

Modify the requirement of paragraph 630 (c) regarding Model 48 Y uranium hexafluoride cylinders to recognize the additional risks involved in retrofitting this package so that it *unquestionably* passes the thermal test prescribed in paragraph 728.

Justification for change:

1. Due its scope and nature, the performance of a live thermal test for a 14-ton UF_6 cylinder is impractical;
2. A Coordinated Research Program was developed to model the behavior of a Model 48Y cylinder in a fire as prescribed by para 728. Although the results of the six independent studies were in close agreement, the small range of results straddled the 30-minute requirement. Because of this low level of uncertainty, the community of experts could agree that the survival time was approximately 30 minutes but they could not state conclusively that it exceeded thirty minutes.
3. A consortium of users of these packages collaborated to design thermal protective devices, that when applied, conclusively ensured that the packages would pass the test in para 728.
4. Field work on prototypes and actual production units have shown that an additional risk to employees is incurred during the installation and removal of these thermal devices. Employees are subjected to an increased radiological dose due to additional working time in close proximity to the cylinder. Additionally, physical safety hazards are also incurred during this process due to bending, lifting and other activities involved.
5. The purchase and use of these devices also adds a significant financial burden to all shippers of these cylinders. This is not only due to the initial purchase of the devices, but also due to the significant increase in time to prepare a cylinder for shipment, to

perform the necessary QA functions on the thermal device, maintenance and repairs to the device, and eventual replacements.

Conclusion

The minimal benefit gained when this device is used to offset the uncertainty of the results of the CRP does not warrant the increased radiological dose and safety exposure to the employees and financial impact of the device to the UF_6 industry.

Additional information quantifying this risk/benefit analysis will be made available to justify this request for modification.